CLAIMS

1) A blood treatment unit (15)(60) comprising CO_2 removing means (23) having at least a first inlet (25) for receiving a flow of blood for CO_2 removal, and at least a first outlet (45) for the flow of blood deprived of CO_2; and filtering means (24) having at least a first inlet (48) for receiving a flow of blood for purification, and at least a first outlet (50) for the flow of purified blood; said blood treatment unit (15)(60) being characterized in that said CO_2 removing means (23) and said filtering means (24) are integrated to form one body.

2) A blood treatment unit (15) as claimed in Claim 1, characterized in that said filtering means (24) are integrated in said CO_2 removing means (23).

3) A blood treatment unit (15) as claimed in Claim 1, characterized in that said first outlet (45) of said CO_2 removing means (23) is connected to said first inlet (48) of said filtering means (24) to supply to the filtering means (24) the blood deprived of CO_2.

4) A blood treatment unit (15) as claimed in Claim 2, characterized in that said CO_2 removing means (23) comprise an inner seat (40) housing said filtering means (24).

5) A blood treatment unit (15) as claimed in Claim 4, characterized in that said CO_2 removing means (23) comprise a first casing (34) housing a number of

membranes (35) for removing CO_2 from the blood.

6) A blood treatment unit (15) as claimed in Claim 5, characterized in that said filtering means (24) comprise a second casing (39) housed inside said first casing (34) and in turn housing a number of blood purifying membranes (46).

7) A blood treatment unit (15) as claimed in Claim 6, characterized in that said membranes (35) for removing CO_2 from the blood are interposed between said first and said second casing (34, 39).

8) A blood treatment unit (15) as claimed in Claim 7, characterized in that said CO_2 removing means (23) comprise a container (40) interposed between said membranes (35) for removing CO_2 from the blood and said second casing (39) and internally defining said inner seat (40).

9) A blood treatment unit (60) as claimed in Claim 1, characterized in that said CO_2 removing means (23) and said filtering means (24) are housed in respective separate casings (34, 39); said casings (34, 39) being joined and fixed rigidly to each other.

10) A blood treatment unit (60) as claimed in Claim 9, characterized in that said casings (34, 39) are heat sealed rigidly to each other.

11) A blood treatment unit (60) as claimed in Claim 9, characterized in that said filtering means (24) are connected rigidly to said CO_2 removing means (23) so as to project outwards from said CO_2 removing means (23).

12) A blood treatment unit (15)(60) as claimed in Claim 1, characterized in that said filtering means (24) comprise at least one drain channel (47) by which, in use, a diluting liquid obtained from the blood is expelled during purification of the blood; said drain channel (47) being connected to said first inlet (25) of said CO_2 removing means (23) to supply said diluting liquid to the CO_2 removing means (23).

13) A blood treatment unit (15)(60) as claimed in Claim 1, characterized in that said CO_2 removing means (23) comprise a second inlet (38) for receiving oxygen; and a second outlet (44) for expelling CO_2 from the blood.

14) A blood treatment unit comprising CO_2 removing means (23) having at least a first inlet (25) for receiving a flow of blood for CO_2 removal, and at least a first outlet (45) for the flow of blood deprived of CO_2; and filtering means (24) having at least a first inlet (48) for receiving the flow of blood, at least a first outlet (50) for the flow of purified blood, and at least one drain channel (47) by which, in use, a diluting liquid obtained from the blood is expelled during purification of the blood; said drain channel (47) being connected to said first inlet (25) of said CO_2 removing means (23) to supply said diluting liquid to the CO_2 removing means (23).

15) A blood treatment machine (1)(65), characterized by comprising a blood flow circuit (2)(66) having two

blood feed conduits (4, 5) connectable to a patient's body; and a blood treatment unit (15)(60) connected to said blood flow circuit (2)(66); said blood treatment unit (15)(60) being formed as claimed in Claim 1.

16) A machine (1)(65) as claimed in Claim 15, characterized by comprising a control device (70) connectable to said treatment unit (15)(60) to regulate blood flow to and from said treatment unit (15)(60).

17) A machine (1)(65) as claimed in Claim 16, characterized in that said control device (70) comprises first pumping means (71) for circulating the blood in said blood flow circuit (2)(66) at a predetermined pressure, so as to draw the blood from the patient's body and feed it to said treatment unit (15)(60), and for feeding the blood from said treatment unit (15)(60) back into the patient's body.

18) A machine as claimed in Claim 16, characterized in that said control device (70) comprises second pumping means (72) connected between said drain channel (47) of said filtering means (24) and said first inlet (25) of said CO_2 removing means (23) to pump the diluting liquid, obtained from the blood by said filtering means (24), to said CO_2 removing means (23).

19) A machine as claimed in Claim 15, characterized in that said control device (70) comprises detecting means (73, 74, 76, 83) for measuring a number of parameters relating to the blood flow in said blood flow circuit (2)(66).

20) A machine as claimed in Claim 19, characterized by comprising display means (77, 78, 79, 80, 81, 82) for displaying the parameters measured by said detecting means (73, 74, 76, 83).